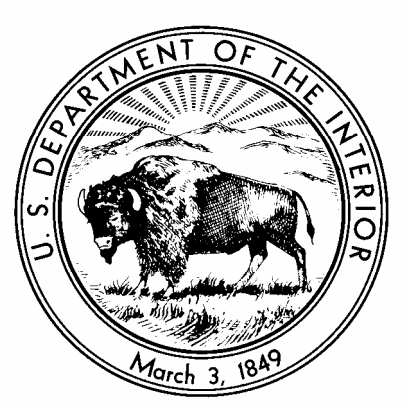

United States Department of the Interior

NATIONAL PARK SERVICE

Indiana Dunes National Lakeshore
1100 N. Mineral Springs Road
Porter, Indiana 46304-1299

DRAFT

Environmental Assessment:
ATV Trail Utilization, West Beach

December 3, 2004

ENVIRONMENTAL ASSESSMENT:
ATV TRAIL UTILIZATION, WEST BEACH
Indiana Dunes National Lakeshore

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1.0 INTRODUCTION

West Beach is a popular swimming, hiking and aesthetic use area of Indiana Dunes National Lakeshore (the Lakeshore) located along Lake Michigan, near the Porter/Lake County Line in Northwest Indiana. Weather-related surf and wave conditions, longshore currents, riptides and visitor negligence contribute to several water-related emergencies each year. Many of these emergencies occur after recreational assistants (lifeguards) go off duty at 6 p.m., or even after the park gates are closed at 9 p.m. Other time-critical medical, health or law enforcement responses are also necessary. West Beach is located amidst several major municipal, industrial and commercial harbors distributed between Chicago, Illinois and Michigan City, Indiana. It is also located to the south of major commercial shipping lanes. In the event of an onshore, coastal or offshore vessel spill, ballast discharge, sewage spill, overflow or other catastrophe, the trail provides emergency access for responders acting to protect both human health and the environment. In addition, seasonal bacteriological monitoring is necessary to document contaminant levels along Lake Michigan beaches to protect human health. In addition to emergency access, the ATV trail provides access for scientific surveys, water quality monitoring and routine maintenance along the beach and associated hiking trails.

The Lakeshore has utilized the northern, 45 meters of an existing trail for access to West Beach and the Lake Michigan shoreline since construction of the West Beach Pavilion in 1976. Prior to 2001, this trail was used to transport (hand-carry) inflatable boats, wave runners and other equipment to and from the beach. This equipment was used by lifeguards, law enforcement, scientific, and other Lakeshore and official personnel. When not in use, the equipment was stored in a lockable storage unit constructed beneath the pavilion walkway approximately 10 meters from the beach or hand-carried to vehicles parked along the existing park road.

An additional 70 meters of trail was developed around the west side of the pavilion in the summer of 2001, when the Lakeshore purchased ATVs to expedite emergency beach access and service. Reductions in Lakeshore funding necessitated reductions in the number of recreation assistants (lifeguards) patrolling the 1.2 mile long beach and the Lakeshore believed ATVs were needed to adequately patrol the swimming area. ATVs are also necessary to expedite law enforcement, human and environmental health-related operations, water quality monitoring, terrestrial monitoring and scientific surveys.

Vehicular access to the beach is restricted to three points; the ATV trail around the pavilion, a path to the beach from the Town of Ogden Dunes, approximately 2,000 feet to the east, and a path to the beach from Wells Road approximately 4,450 feet to the west. Access to the Ogden Dunes trail is approximately five miles from the pavilion by public road (Park road, County Line Road, State Highway 12 and Ogden Dunes town streets) and across two, busy

railroad crossings. Access to the Wells Street entrance is approximately two miles from the pavilion via Lakeshore Road, County Line Road, Oak Avenue and Wells Street.

The Lakeshore believes local access to the beach and shoreline serves a vital function. Human or environmental health emergencies and some law enforcement situations require immediate response and transportation. Drownings, near-drownings and other human health emergencies occur every swimming season, both during and between open beach hours.

ATVs are presently stored and secured inside the elevated pavilion and the only ATV accessible entrance is through the front (inland, south) door, necessitating the transport of vehicles around the pavilion between uses (Figure 2). The trail extends through an area heavily impacted by construction of the pavilion and is opened annually by mechanically removing sand along a path through the foredunes immediately adjacent to the pavilion. The foredunes are populated primarily by marram grass (*Ammophila breviligulata*), though there are 12 other plants common in or found in the area. One species, Pitcher's thistle (*Cirsium pitcheri*) is on the Federal Threatened Species List. This species has not been observed or documented in the area surrounding the pavilion or ATV trail. No other Federal or State-listed endangered or threatened species, plant, animal or other, has been found within or is known to be dependent upon the existing foredune plant community impacted by construction or utilization of the pavilion or ATV trail. The sea rocket (*Cakile edentula)* has a limited distribution within the Lakeshore and is in apparent decline in the West Beach area (Bowles, 1989).

Five alternatives are considered in this Environmental Assessment: 1) No action (utilizing the trail as it currently exists), 2) routing the southern portion of the trail beneath the elevated pavilion, 3) eliminating the southern portion of the trail altogether and constructing an additional lockable storage unit beneath the walkway to store ATVs, 4) building an ATV ramp at the north end of the pavilion walkway, and 5) eliminating the ATV trail completely (environmentally preferred alternative). Impacts to natural and cultural resources, visitor use and experience, and socioeconomic conditions are considered and discussed.

2.0 PURPOSE AND NEED

The purpose of the All-Terrain Vehicle (ATV) trail around the West Beach Pavilion is to provide expeditious, ergonomic, economic, multi-purpose access to the beach by law enforcement, recreation assistant (life guard), emergency service, scientific and other Lakeshore and official personnel. This Environmental Assessment addresses five alternatives for the management of the trail, extending from the West Beach Lakeshore road, around the west side of the pavilion, through 115 linear meters of foredunes to the beach on Lake Michigan (Figures 1, 3, 4, 6, 7 and 8). Using the trail as it exists, moving the southern portion of the trail beneath the pavilion, eliminating the southern portion of the trail altogether by building additional ATV storage beneath the walkway, building an ATV access ramp at the north end of the pavilion walkway, and eliminating the ATV trail completely are discussed, along with potential impacts to environmental and human health, public safety, routine maintenance, visitor protection and enjoyment.

2.1 Purpose of the Environmental Assessment

The purpose of this document is to address environmental and aesthetic concerns associated with continued use of the existing ATV trail. The document describes existing conditions as a baseline for comparing the environmental consequences of adopting one of four alternate strategies for management of the trail. Approximately the northern 45 meters of the three-meter wide trail has been used for beach access since 1976. Approximately the southern 70 meters of the trail, which winds around the west side of the pavilion, has been used for ATV access since the Lakeshore began using 6x6x4 and 6x6x6 ATVs in the summer of 2001.

2.2 Need for the Environmental Assessment

The assessment is needed to evaluate the potential impacts of continued use, alterations in the use or eliminating the use of the ATV trail to the foredune environment, cultural resources, Lakeshore and emergency services, aesthetics, visitor use and enjoyment, and public safety.

3.0 BACKGROUND

Indiana Dunes National Lakeshore has utilized the northern 45 meters of the three-meter wide ATV trail for multi-purpose beach access since construction of the pavilion in 1976. Prior to 2001, the path between the pavilion and the swim area (through the foredunes) was used to transport inflatable boats, wave runners and other equipment to and from West Beach. The equipment was used by Lakeshore lifeguards, law enforcement, resource management, scientific and other personnel. Boats and equipment were stored beneath the pavilion walkway (Figures 1, 8 and 9). Other equipment was hand-carried to the trail from the existing Lakeshore road. Since lengthening the trail in 2001 to allow ATV access from the pavilion and the Lakeshore road, trail use and timely access has improved lifeguard efficacy and swimmer protection, emergency medical transport of injured or sick visitors and personnel, accomplishment of beach surveys, law enforcement activities and other projects, as needed.

Extension of the trail was accomplished directly adjacent to the pavilion, through areas of the foredunes already impacted by pavilion construction. Natural succession since construction in 1976 resulted in a plant population composed primarily of marram grass (*Ammophila breviligulata*) in the impacted area. Several other plant species are scattered throughout the vicinity. There are no Endangered Species found in the West Beach foredunes and the only species on the Federal Threatened Species List is the Pitcher's thistle (*Cirsium* pitcheri) (U.S. Government, 1999; State of Indiana, 2004). Presence of this species has not been documented in the vicinity of the ATV trail. The sea rocket (*Cakile edentula*) has limited

distribution within the Lakeshore and Bowles (1989) noted a significant decline in the West Beach population.

3.1 Relationship to Other Planning Projects

Extension of the trail was related to improvements in emergency beach access. ATV use is necessary to support lifesaving, emergency services, law enforcement, human and environmental health, first aid, scientific survey, and other actions within West Beach and along the Lake Michigan shoreline.

3.2 Objectives and Issues

The objective is to provide effective, expeditious access to West Beach for the purposes of public safety, emergency services, law enforcement, scientific research, and protection of human and environmental health, while protecting the foredune environment to the extent practicable. Primary issues deal with the hindrance of natural foredune plant community succession and detriments to local aesthetics in the area impacted by the existing ATV trail.

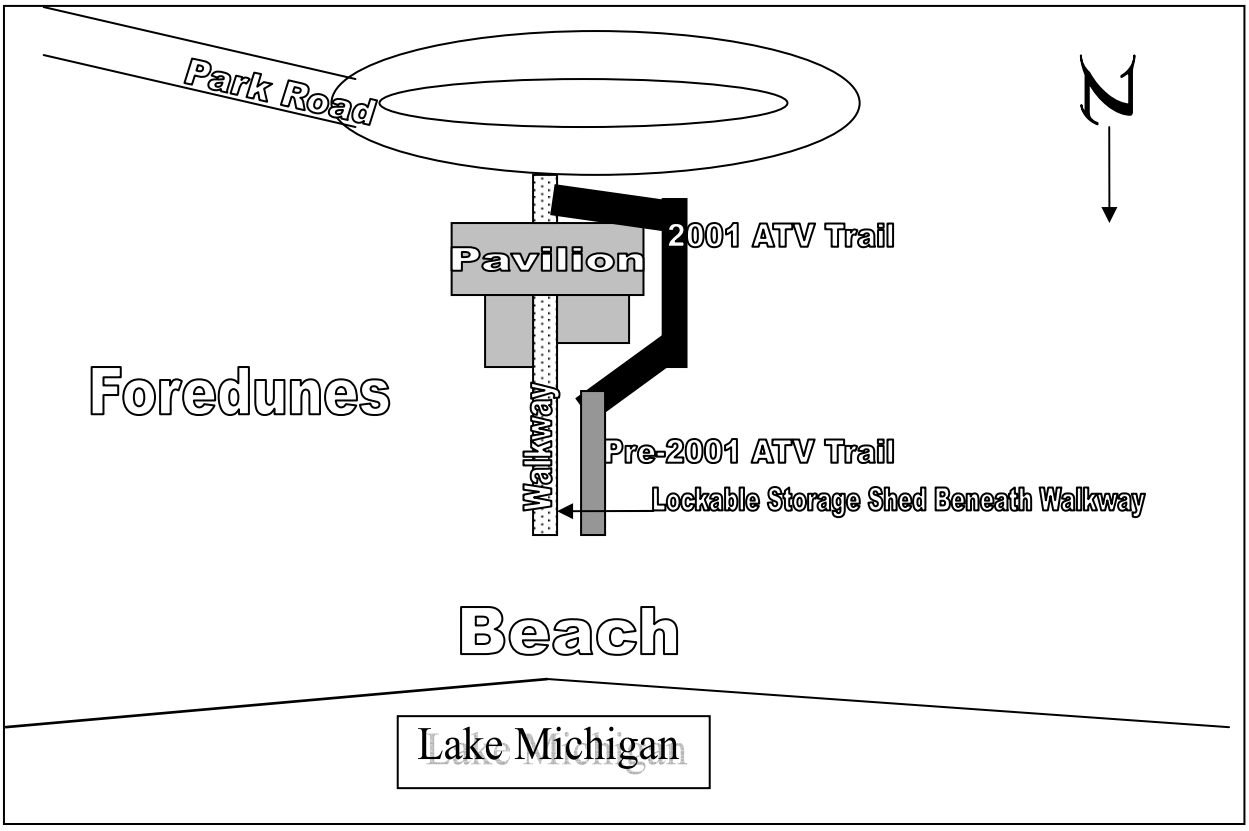

Figure 1: West Beach Pavilion with existing ATV Trail

3.3 Impact Topics Identified for Analysis

3.3.1 Natural Resources

The foredune plant community along West Beach consists of 12 recorded, native species. One species, Pitcher's thistle (*Cirsium pitcheri*), is on the Federal Threatened Species List. The Pitcher's thistle has not been observed in the area surrounding the ATV trail or the pavilion. The remaining species common to the foredunes area include marram grass (*Ammophila breviligulata*), lyre-leaved rock cress (*Arabis lyrata*), field sagewort *(Artemisia caudate*), sea rocket (*Cakile edentula*), prairie sandreed (*Calamovilfa longifolia*), American bugseed (*Corispermum hyssopifolium*), winged pigweed (*Cycloloma atriplicifolium*), flowering spurge (*Euphorbia corollata*), seaside spurge (*Euphorbia polygonifolia*), cottonwood (*Populus deltoids*) and Rand's goldenrod (*Solidago racemosa*). Distribution of the sea rocket (*C. edentula*) is limited within the Lakeshore and a decline in the West Beach population was noted by Bowles (1989).

Though other endangered and threatened animal and other species exist within the Lakeshore, there are no threatened or endangered species associated with or primarily dependent upon the West Beach foredune community in the vicinity of the pavilion or ATV trail.

No geological, hydrological or associated concerns have been noted relative to utilization of the ATV trail. The foredunes constitute a dynamic, drifting sand environment that undergoes constant change and succession. Drifting sand fills portions of the current trail during the ATV off-season (fall through early spring) and these sand drifts are mechanically removed along the trail in the late spring and worn down by ATV traffic during the summer season.

3.3.2 Cultural Resources

No known cultural or historic resource concerns have been noted along the route of the ATV trail. Historic materials probably associated with a structure were discovered on a dune slope, approximately 600 feet inland from the bathhouse (pavilion) (Ehn, 1997).

3.3.3 Visitor Use and Experience

West Beach is a popular swimming beach, while the foredunes area is a valuable scenic and natural resource. Public utilization of the dunes is primarily through the use of established hiking trails. Thousands of visitors from around the world visit the beach and foredunes each year.

3.3.4 Socioeconomic Environment

Impacts of each alternative on the local economy would be negligible, based on estimated impacts to local businesses and on relationships with the surrounding community. An engineering assessment and fuel for excavation equipment would likely be required, should the trail be re-routed beneath the pavilion (Alternative B). Fuel for equipment, electrical work and supplies, security alarm installation and some construction materials (lumber, cement, cinder blocks, nails, bolts, screws, and other materials) would be required, should additional ATV storage be constructed beneath the walkway (Alternative C). Some fuel and construction materials would also be required if a ramp is built at the north end of the walkway (Alternative D).

4.0 PROPOSAL AND ALTERNATIVES

4.1 Alternative A (No Action) (Preferred Alternative)

The No Action alternative would maintain the current configuration of the ATV trail around the West Beach pavilion. No change in management actions or trail use would occur. Mechanical removal of winter storm-blown sand along the trail would continue each spring. The pavilion offers optimum security for storage of ATVs where they are readily available for emergency response.

4.2 Alternative B (Routing ATV Trail beneath the Pavilion)

The pavilion is constructed upon concrete pilings, allowing standing access beneath the majority of the structure. Alternative B would re-route the ATV trail beneath the building, allowing recovery and natural succession to occur throughout 60 of the 70 southernmost linear meters of the ATV trail (180 square meters total). The southernmost 10 meters of trail would remain to connect the trail with the front walkway and Park road. The primary plant species (most common in the area) expected to populate the trail once abandoned would be marram grass (*A. breviligulata*). ATV's currently used by Lakeshore and emergency services staff along the trail are 6x6x6 or 6x6x4 models with rear transport platforms, roll bars, roofs and yellow-flashing roof lights (see Figure 13 in the appendix, Section 10.0). Total height of these vehicles is approximately 7 feet. Vertical access beneath substantive,

horizontal concrete beams under the pavilion ranges from 5 to 7.5 feet. In addition, height in the entrance area beneath the pavilion is currently approximately 4 feet. Substantial initial excavation would be required to open the entrance area and to allow safe ATV operation beneath all horizontal concrete beams. Substantial annual and weather-related maintenance excavation would be required to maintain adequate clearances for ATV operation. Excavation beneath the structure would be more difficult and expensive than excavation in open areas and could undermine the stability of the structural support columns. An engineering study would need to be undertaken to determine whether such extensive excavation beneath the structure is feasible, economical or advisable.

4.3 Alternative C (Eliminating Southernmost 105 meters of the ATV Trail, Constructing Lockable ATV Storage beneath the Walkway)

This alternative would eliminate the post-2001 portion of the trail, along with 35 meters of the 45 meter long, pre-2001 trail. Benefits would include restoration of 105 linear meters (315 square meters) of trail, once natural succession occurs. An additional lockable storage structure would be constructed beneath the walkway, adjacent to the existing zodiac storage area, approximately 10 meters south of the beach-end of the walkway (Figures 1, 8 and 9). Height beneath the walkway at this point ranges from approximately 2 to 7 feet (see Figure 9). Construction of a 20' by 8' structure at this site would require excavation of approximately 27 cubic yards of sand to provide sufficient height for construction of a concrete base and allow adequate vertical access for ATV use. In addition, substantial seasonal and routine, winter storm maintenance excavation in front of the structure would be required to assure unrestricted access. Construction of ATV storage space at this location would not require ATV utilization beneath the pavilion (Figure 1). ATVs could be driven approximately 10 meters up the pre-2001 trail and turned to enter the storage locker beneath the walkway. However, the storage structure would have to be constructed of materials which would minimize the possibility of break in, vandalism and/or theft. Construction would be of cinder block or concrete and possess a steel door big enough to allow ATV entry, a secure locking system and an unauthorized entry (burglar) alarm. Lakeshore rangers routinely investigate vandalism, break-ins and other incidents at the zodiac locker located beneath the walkway. The location is out of sight of most visitors and summer recreation assistants leave duty at 6 p.m. The beach remains open until gates are locked at 9 p.m. The majority of incidents reported to Rangers occur during this period when no recreational assistants are on duty. In addition, rangers report repeated burglar alarm system failures at the pavilion, due to problems with the NIPSCO power lines. Thus, storage of ATVs in a locker beneath the walkway would result in significant construction costs and a significant security risk. Replacing stolen or repairing vandalized ATVs would be prohibitively expensive.

Elimination of the southernmost 105 meters of the ATV trail would have insignificant impact on the ability of Lakeshore personnel to respond to human health and environmental emergencies on the beach and in Lake Michigan, along the shoreline

and the associated hiking trails, as long as ATV storage is constructed beneath the walkway. The northernmost 10 meters of the pre-2001 portion of the trail would continue to exist, to allow beach access to the zodiac and ATV storage areas. ATVs could be delivered to the beach at the beginning of each swimming season and removed for maintenance, etc., by using either the Ogden Dunes or Wells Street entrance. Routine, overnight storage during the swimming season would be beneath the walkway. Lakeshore lifeguards and emergency response personnel would have timely, around-the-clock, primary ATV access to the beach, shoreline and swimming waters to respond to emergency medical, law enforcement and environmental situations. Many drownings or near-drownings occur along West Beach during hours when the Lakeshore is closed to the public. (Two drownings occurred during the summer of 2004. Both incidents occured after the beach was officially closed and public access gates were locked.) As long as ATVs are stored beneath the walkway, quick ATV access to the injured person would be possible.

4.4 Alternative D: Building an ATV Access Ramp at the North End of the Pavilion Walkway

This alternative would eliminate the southernmost 70 meters of the post-2001 ATV trail and 35 meters of the pre-2001 trail through the foredunes, allowing natural restoration and revegetation of approximately 315 square meters of foredunes. (The northernmost 10 meters of trail would remain to allow beach access to the zodiac storage area beneath the walkway.) The ramp would allow beach ATV access by constructing a 50 foot by 8 foot, wood ramp at the north end of the existing, elevated pavilion walkway. Construction would necessitate lockable entrance gates at both ends of the ramp to prevent unauthorized and unsafe public use of the ramp (sledding, roller blading, skateboarding, handicapped or wheel chair use, etc.) Length of the ramp would have to be limited, increasing incline to approximately 45 degrees, as winter shelf ice accumulation comes to within 20 to 30 feet of the base of the steps. Such a steep grade would create significant safety concerns for ATV drivers and passengers. In addition, ramp construction would eliminate public use of a small portion of the beach access steps and force ATVs to utilize the walkway concurrently with public pedestrians. Annual mechanical removal of accumulated blown sand along the southern 105 meters of the trail would be eliminated. Annual removal of accumulated blown sands from the foot of the ramp would be required, but this is already required at the foot of the steps. Natural aesthetics in the foredunes alongside the pavilion and walkway would be improved, as the ATVs would drive directly from the walkway, down the ramp and onto the beach.

4.5 Alternative E (Eliminating ATV Trail Completely) (Environmentally Preferred Alternative)

Complete elimination of the ATV trail would allow natural revegetation and succession along all 115 meters of ATV trail (345 square meters.) Natural aesthetics

would be improved along the entire western side of the pavilion and walkway. However, this would result in the elimination of direct beach access to both the current zodiac storage area and the Park road. ATVs would require daily trailer-transport between the West Beach Vehicle Maintenance compound (where they would be stored overnight) and either the Odgen Dunes beach entrance or the entrance at Wells Street. ATVs would be transported aboard transport trailers. The maintenance facility is situated nearly 5 miles from the Ogden Dunes beach access via town streets, State Highway 12, County Line Road and Lakeshore roads. Two busy railroad crossings are located along the route. The facility is located approximately 0.8 mile from the Wells Street beach entrance via Wells Street, Oak Avenue, County Line Road and Park roads.

Should an emergency occur when the ATVs are stored at the maintenance facility, time needed to trailer an ATV from the facility to the Ogden Dunes access is 10 minutes, provided there are no train delays. The time needed to unlock gates at the maintenance facility and at the Ogden Dunes trail add approximately four minutes, while hooking the trailer onto the towing vehicle would take an additional four to six minutes. (The Lakeshore does not have vehicles available to dedicate to ATV transport. Therefore, the trailer would need to be hooked to the towing vehicle at the time of the incident.) Train delays could add an estimated three to six minutes to this response time. ATV driving time from the Ogden Dunes entrance through the foredunes and along the beach to the pavilion is approximately three minutes, bringing initial response time to approximately 23 to 29 minutes. Should an incident occur at the far, west end of the beach (Ogden Dunes is located at the east end of the beach) an additional three minutes ATV travel time would be required to reach the site. Total response times are already impacted by the need to travel at low (walking) speeds along the beach when injury or illness victims are being transported. Responders walk alongside the ATV transporting the victim to stabilize the gurney, protect the victim from bumps and jolts, and monitor the victim's condition. It takes approximately 17 minutes to transport a victim in this manner from the west end of the beach (Lake/Porter County Line Road) to the pavilion. Should the victim need transport to the Ogden Dunes entrance, six additional minutes would be required, bringing total possible response time to 43 to 49 minutes.

Trailering the ATV to the Wells Street beach entrance from the vehicle maintenance compound takes approximately 3 minutes. Add the time needed to unlock two gates (4 minutes), hook the trailer to the towing vehicle (4 to 6 minutes) and drive the ATV from Wells Street along the beach to the pavilion (4 minutes), initial response time would be approximately 15 to 17 minutes. If the victim were located near the western end of the beach, transport of the patient to the pavilion could take as long as 17 minutes, bringing the total response time to 32 to 34 minutes, whether the victim is returned to the Wells Street entrance or transported to the pavilion.

5.0 ENVIRONMENTAL CONSEQUENCES

5.1 Alternative A (No Action)

Preferred Alternative

5.1.1 Natural Resources

The No Action alternative would leave the site unchanged. Natural revegetation and succession along the entire 115 linear meters of the ATV trail would be inhibited, but no irreversible impacts to the foredunes would be expected. Should the Lakeshore decide to close the trail in the future, natural revegetation and succession would then occur. Impacts to other natural populations, geology, hydrology and associated parameters would remain negligible.

5.1.2 Cultural Resources

No known cultural or historic resource concerns have been noted along the route of the ATV trail.

5.1.3 Visitor Use and Experience

There would be no change in impact to potential visitor use or experience associated with the No Action alternative. This action would allow continued, rapid response to emergency incidents along the 1.2 miles of beachfront.

5.1.4 Socioeconomic Environment

There would be no change in impact to the local socioeconomic environment associated with the No Action alternative.

5.2 Alternative B (Routing the ATV Trail beneath the Pavilion)

5.2.1 Natural Resources

Re-routing the southern 70 meters (post-2001 construction) of the ATV trail to run beneath the pavilion would allow revegetation and natural succession to occur along approximately 60 linear meters of the current trail. The southern 10 meters of the trail would remain in use, allowing access beneath the pavilion from the front walkway and Park road. This alternative would allow natural revegetation and reclamation of approximately 180 square meters of foredunes. Revegetation would result in some additional erosional stability in this portion of the inherently dynamic dunes. Impacts to other natural populations, geology, hydrology and associated parameters would remain negligible. The trail would be available for use by law enforcement, life guards, scientists, maintenance

workers, human and environmental health responders, and other Lakeshore or official personnel.

5.2.2 Cultural Resources

Re-routing would not contribute to any known change in impact to potential cultural or archaeological resources in the foredunes surrounding the West Beach pavilion. The area beneath the pavilion has already been excavated and otherwise significantly impacted by pavilion construction. No known cultural or historic resource concerns have been noted along the existing or proposed route of the ATV trail.

5.2.3 Visitor Use and Experience

Moving the ATV trail beneath the pavilion would allow natural revegetation and succession along approximately 60 linear meters of the current trail. This would lead to enhanced aesthetic quality along the west side of the pavilion.

5.2.4 Socioeconomic Environment

There would be negligible impact to the local socioeconomic environment associated with movement of the trail beneath the pavilion. However, substantial initial excavation and routine annual or seasonal excavation and maintenance beneath the structure would be required. Engineering studies to estimate potential impacts of excavation beneath the pavilion (possible damage to support columns and structural integrity), costs of excavation and other concerns would be required before work could commence. Once the engineering study is completed, remaining tasks would likely be completed by Lakeshore personnel, utilizing Lakeshore equipment and resources. This would result in significant personnel, equipment, fuel and maintenance costs to the Lakeshore. These monies would go into the local economy.

5.3 Alternative C (Eliminating southernmost 105 meters of the ATV Trail and Constructing Lockable ATV Storage beneath the Walkway)

5.3.1 Natural Resources

Eliminating the post-2001 portion of the ATV trail along with the southern 35 meters of the pre-2001 trail would allow natural revegetation and succession to occur along 105 linear meters of the current trail. It would provide some erosional stability to the inherently dynamic dunes. Approximately 315 square meters of foredunes would be reclaimed for natural

recovery. Impacts to other natural populations, geology, hydrology and associated parameters would remain negligible.

5.3.2 Cultural Resources

Eliminating the southern 105 meters of the ATV trail would have negligible impact on known or potential cultural or archaeological resources in the foredunes surrounding the West Beach pavilion. No known cultural or historic resource concerns have been noted along the route of the ATV trail.

5.3.3 Visitor Use and Experience

Eliminating the southern 105 meters of the ATV trail would allow natural revegetation and succession to occur along the current route of the trail. This would lead to enhanced aesthetics in the foredunes along nearly the entire west side of the pavilion.

5.3.4 Socioeconomic Environment

There would be negligible impact to the local socioeconomic environment associated with elimination of the southernmost 105 meters of the ATV trail. This alternative would involve simple abandonment of the trail to allow natural revegetation and succession. However, the trail would no longer be available for use by lifeguards and other Lakeshore or emergency response personnel, negatively impacting human health and environmental emergency response and restricting emergency and other official vehicular access to the beach and shoreline.

5.4 Alternative D: Building an ATV Access Ramp at the North End of the Pavilion Walkway

5.4.1 Natural Resources

Building an ATV access ramp at the north end of the pavilion walkway would allow elimination of the southern 105 meters of the ATV trail. This would allow natural revegetation and succession to occur along nearly the entire west side of the pavilion and walkway. It would provide some erosional stability to the inherently dynamic dunes. Approximately 315 square meters of foredunes would be reclaimed for natural recovery. Impacts to other natural populations, geology, hydrology and associated parameters would remain negligible.

5.4.2 Cultural Resources

Building an ATV access ramp and eliminating the ATV trail would have negligible impact on known or potential cultural or archaeological resources in the foredunes surrounding the West Beach pavilion. No known cultural or historic resource concerns have been noted along the route of the ATV trail or on the beach in front of the pavilion. The ramp would end at the edge of the beach, where the area is already impacted by pedestrian traffic and annual mechanical sand removal.

5.4.3 Visitor Use and Experience

Building an ATV access ramp and eliminating the ATV trail would allow natural revegetation and succession to occur along nearly the entire current route of the trail. This would lead to enhanced aesthetics and more natural succession in the foredunes along the west side of the pavilion. The ramp would reduce the width of the beach access stairway and require concurrent utilization of the elevated walkway by both pedestrians and motorized vehicles. The steep slope of the proposed ramp (approximately 45 degrees) would make use by visitors unsafe. Therefore, the ramp would need to be enclosed and locked to prevent unauthorized access.

5.4.4 Socioeconomic Environment

There would be negligible impact to the local socioeconomic environment associated with construction of an ATV access ramp. This alternative would involve construction of a 50 x 8 foot wood ramp, with security rails and lockable gates at both ends. A minimal amount of lumber, nails, screws and related materials would need to be purchased. Labor and equipment would likely be provided by Lakeshore personnel. Maintenance and fuel for the equipment would also be required. Some annual excavation of migrating beach sand at the base of the ramp would be required, but removal of sand at the base of the stairs is already required. This removal would not likely add significantly to the amount of sand already being removed on an annual basis.

5.5 Alternative E: Eliminating the ATV Trail Completely (Environmentally Preferred Alternative)

5.5.1 Natural Resources

Eliminating the ATV trail completely would allow natural revegetation and succession to occur along all 115 linear meters of the ATV trail. It would provide some erosional stability to the inherently dynamic dunes. Approximately 345 square meters of foredunes would be reclaimed for natural recovery. Impacts to other natural populations, geology, hydrology and associated parameters would remain negligible.

5.5.2 Cultural Resources

Eliminating the ATV trail would have negligible impact on known or potential cultural or archaeological resources in the foredunes surrounding the West Beach pavilion. No known cultural or historic resource concerns have been noted along the route of the ATV trail or on the beach in front of the pavilion.

5.5.3 Visitor Use and Experience

Eliminating the ATV trail would allow natural revegetation and succession to occur along the entire current route of the trail. This would lead to enhanced aesthetics and more natural succession in the foredunes along the entire west side of the pavilion. However, elimination of the trail would significantly increase response times to emergency incidents along the 1.2 miles of beachfront, potentially jeopardizing visitor health and safety.

5.5.4 Socioeconomic Environment

There would be negligible impact to the local socioeconomic environment associated with elimination of the ATV trail.

6.0 CONSULTATION AND COORDINATION

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Bob Daum – Resource Management, Chief
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Janice Slupski – Resource Management, Historian

J.D. Swed – Resource Protection, Chief Ranger
Bill Tadych – Resource Protection, Park Ranger
Garry Traynham – Assistant Park Superintendent

7.0 COMPLIANCE WITH FEDERAL AND STATE REGULATIONS

The following Federal and State environmental protection laws were reviewed and consulted during the preparation of this document. These materials are adopted by reference.

Endangered Species Act
National Historic Preservation Act
Executive Order 11644 and 11989: Off-road Vehicles on Public Lands
Coastal Zone Management
NPS Management Policies:
Director's Order #12: Conservation Planning, Environmental Impact Analysis and Decision Making
1.4.3 Obligation to Conserve and Provide for Enjoyment of Lakeshore
1.4.4 Prohibition on Impairment of Lakeshore Resources and Values
1.4.5 What Constitutes Impairment of Lakeshore Resources and Values
1.4.6 What Constitutes Lakeshore Resources and Values
1.4.7 Decision-making Requirements to Avoid Impairments
8.1 (Use of the Lakeshores) General

Indiana Title 14: Natural and Cultural Resources, Article 22: Fish and Wildlife, Chapter 34. Nongame and Endangered Species Conservation

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U.S. Government, 1999. Endangered and Threatened Wildlife and Plants, 50 CFR 17.11 and 17.12, Dec. 1999.

9.0 PREPARER

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10.0 APPENDIX – Photographs

Figure 2: Front entrance to West Beach Pavilion with entrance to ATV trail through wooden gate to left. Present ATV storage is inside blue door near center of picture.

Figure 3: South west corner of pavilion showing post-2001 portion of ATV trail winding around building and through dune community composed primarily of marram grass (*A. breviligulata)*.

Figure 4: Southwest corner of pavilion showing post-2001 portion of ATV trail and entrance beneath the pavilion to the far right (Alternative B).

Figure 5: Close-up view of proposed ATV entrance beneath pavilion. Note height of sand beneath entrance. Current access height is approximately 4 feet.

Figure 6: Continuation of post-2001 ATV trail around west side of pavilion.

Figure 7: Pre-2001 portion of ATV trail alongside walkway, looking south from beach (north) end of elevated walkway.

Figure 8: Pre- 2001 ATV trail alongside walkway, looking toward beach with existing, lockable storage structure for zodiac, waverunners, etc. to the right.

Figure 9: Location of proposed lockable ATV storage locker, adjacent to existing zodiac storage area and beneath the walkway. Note large volume of sand that would require removal prior to construction of a hardened (concrete or cinder block) structure required by security concerns.

Figure 10: Elevated walkway to beach from pavilion. Alternative D (construction of ramp at end of walkway) would necessitate concurrent ATV/pedestrian use of this walkway.

Figure 11: Steps descending to beach from north end of elevated walkway. View looks down at midway platform. Proposed ATV ramp (Alternative D) would likely be constructed along the western edge of the steps (top of picture).

Figure 12: Steps to beach from north end of elevated walkway. Note midway rest platform in stairway. Proposed ATV ramp (Alternative D) would likely be constructed along the near (west) edge of the stairway in this photo. Stairway incline is approximately 45 degrees.

Figure 13: ATV used by Lakeshore Recreational Assistants and other personnel for beach monitoring, emergency response and other operations.